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P-77-B

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27 September 1957

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MEMORANDUM FOR: THE RECORD

SUBJECT : Visit to [REDACTED]

1. Time and Place of Meeting: 23 & 24 September 1957 in Cambridge, Massachusetts.

2. Attendance: [REDACTED] - [REDACTED]

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3. Discussion:

a. P-77 - Research Program

The undersigned carried to [REDACTED] a circuit diagram of the Devenco Carbon Button Transmitter which [REDACTED] will analyze during the next two months. This work and knowledge of its being at [REDACTED] is being restricted to [REDACTED]. [REDACTED] will be doing just about all the work alone and we have set no specific delivery date at this time.

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The radio switch system RS-1 will be ready to be checked out when the undersigned makes his next trip to Cambridge.

The Raytheon 6 MC switch receiver was hand carried to [REDACTED]. This project consists of repackaging the switch receiver for use with the RT-2 series of transmitters. This repackaged receiver will operate from 6 volts DC. The basic philosophy of the pulse coding and the TRF receiver will be maintained but any circuit improvements that can be made during the repackaging will be done. At present it is estimated that four to six of these receivers will be made up but the delivery date will not be decided upon until the contractor had more time to consider the problem.

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[REDACTED] has bought some of the higher powered high frequency Western Electric Transistors. Due to the large demand for these types of transistors and [REDACTED] low priority as far as the supply rating is concerned, the people of [REDACTED] are skeptical about delivering many items in which this transistor might be incorporated. They had suggested that possibly they should put in orders for these items and then when they had

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an order number, the agency, through its channels could possibly have the supplier rush through order. Since his return from this trip, the undersigned has learned that the Agency has a way of procuring these types of transistors and can then turn them over to the contractors. These two methods, at this time, appear to be the most encouraging bits of information for the procurement of up-to-date components that the undersigned has heard of since coming with this Agency. It is the opinion of the undersigned that this type of approach should be encouraged since it appears that the yield will merit the effort.

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b. P-72-B - 5 MC Transceiver

has reported that they found a 15 db improvement in the use of the Shoe Antenna over the Ferrite Rod antenna. Theoretically, this would represent over all improvement of 30 db but since the receiver utilizing the Ferrite Rod antenna was already down in the noise, the total improvement will be less than 20 db. The two transceivers will be set up for use with the Shoe Antenna and will be shipped to Washington in about two weeks.

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c. P-163-D - Surveillance Transmitter

The work being done under this project at the present time is the development of a crystal control FM transmitter. The transmitter being developed at this time will be on a frequency of 74 MC and will have a deviation of 20 KC. The major effort of this project, at one time, was the development of a one watt FM transmitter. It has since been diverted to put the emphasis on a crystal control high powered transmitter. Upon completion of this crystal control study, the contractor will then be able to submit several possible avenues of approach to the high powered crystal control FM transmitter.

d. P-163-E - Surveillance Transmitter - SG-3

Initially, the plans called for the use of tantalum capacitors but since that time reports have been issued to the effect that the electrolytic capacitors are more reliable. In view of this it has been decided to use the electrolytics. At present, transformers have been ordered to be considered for use in the ST-3 and the audio circuitry is being improved in gain and in design to give a more constant drive to the oscillator.

e. P-163-F - Surveillance Transmitter BT-2

This contract has not been received by the contractor yet. Since the undersigned returns to Washington, it has developed that the contract is being held up do to negotiation in the amount of overhead that is to charge on all their contracts.

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f. P-193 - RF - Transmitters

The undersigned carried to a philetta radio which is to be modified for use in a safe house. The modification consists of installing an RF-2B transmitter and power supply within the case. The transmitter will be on when the radio is off and vice-versa. Since the radio will be used in a controlled situation, the problem of concealment is very simple. The radio concealment will be completed within two weeks and will be sent to Washington.

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The undersigned personally checked all of the power supplies for use with the RF-2B. Four of the seven are to be receivers and the one an RF-2B transmitter. All of the above was hand carried to Washington by the undersigned.

g. P-212 - Microphone Pre-amplifier

This contract has not been received for the same reason stated on P-163-F.

h. AM-43-Typeewriter Surveillance Transmitter

A packaged bread board system is to be ready for demonstration in the end of November 1957 at which time the people from and will get together to incorporate the various parts of the system and after it has passed inspection it will be brought to Washington for demonstration.

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i. AM-44 - Carrier Current System in Condenser Can

A bread board model of a detector, for 25 KC to operate the Devanco passive switch, has been developed for use with the carrier current system. This unit will be packaged and delivered to Washington in about two weeks.

showed the undersigned graphs on the attenuation of harmonics that can be obtained when the experimental Burnell Filter is used. The detail report on this filter will be put in the progress report written at the end of this month. The general results are that the carrier current transmitter will no longer be detectible on standard radios plugged into the same line.

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Distribution:

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P-163-E-1

P-163-F-1

P-193 -1

P-212 -1

AH-43 -1

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